

General

Title

Appropriate testing for children with pharyngitis: percentage of children 3 to 18 years of age who were diagnosed with pharyngitis, dispensed an antibiotic, and received a group A streptococcus (strep) test for the episode.

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 2, technical specifications for health plans. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

Measure Domain

Primary Measure Domain

Clinical Quality Measures: Process

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percentage of children 3 to 18 years of age who were diagnosed with pharyngitis, dispensed an antibiotic, and received a group A streptococcus (strep) test for the episode.

Rationale

Pharyngitis is the only condition among upper respiratory infections (URIs) where diagnosis is validated easily and objectively through administrative and laboratory data, and it can serve as an important indicator of appropriate antibiotic use among all respiratory tract infections. Overuse of antibiotics has

been directly linked to the prevalence of antibiotic resistance; promoting judicious use of antibiotics is important to reducing levels of antibiotic resistance (Gonzales et al., 2001). Pediatric clinical practice guidelines (Schwartz et al., 1998) recommend that only children diagnosed with group A streptococcus (strep) pharyngitis, based on appropriate lab tests, be treated with antibiotics. A strep test (rapid assay or throat culture) is the definitive test of group A strep pharyngitis. Excess use of antibiotics is highly prevalent for pharyngitis: about 35 percent of the total 9 million antibiotics prescribed for pharyngitis in 1998 were estimated to be in excess (Seppala et al., 1997).

Evidence for Rationale

Gonzales R, Malone DC, Maselli JH, Sande MA. Excessive antibiotic use for acute respiratory infections in the United States. Clin Infect Dis. 2001 Sep 15;33(6):757-62. [PubMed](#)

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

Schwartz B, Marcy SM, Phillips WR, et al. Pharyngitis-principles of judicious use of antimicrobial agents. J Pediatr. 1998;101:171-4.

Seppala H, Klaukka T, Vuopio-Varkila J, Muotiala A, Helenius H, Lager K, Huovinen P. The effect of changes in the consumption of macrolide antibiotics on erythromycin resistance in group A streptococci in Finland. Finnish Study Group for Antimicrobial Resistance. N Engl J Med. 1997 Aug 14;337(7):441-6. [PubMed](#)

Primary Health Components

Pharyngitis; antibiotics; group A streptococcus (strep) test; children

Denominator Description

Children 3 years of age as of July 1 of the year prior to the measurement year to 18 years of age as of June 30 of the measurement year, with a Negative Medication History, who had an outpatient visit, an observation visit or an emergency department (ED) visit with only a diagnosis of pharyngitis and a dispensed antibiotic for that episode of care during the Intake Period (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

A group A streptococcus (strep) test in the seven-day period from three days prior to the Index Episode Start Date (IESD) through three days after the IESD (see the related "Numerator Inclusions/Exclusions" field)

Evidence Supporting the Measure

Type of Evidence Supporting the Criterion of Quality for the Measure

A formal consensus procedure, involving experts in relevant clinical, methodological, public health and organizational sciences

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Additional Information Supporting Need for the Measure

- Pharyngitis, or sore throat, is a leading cause of pediatric ambulatory care visits and can be caused by a virus or by bacteria (Simon, 2014). Viral pharyngitis does not require antibiotic treatment, but antibiotics continue to be inappropriately prescribed. Inappropriate treatment with antibiotics can lead to antibiotic resistance (when antibiotics can no longer cure bacterial infections) (Centers for Disease Control and Prevention [CDC], "Antibiotics aren't," 2013), which makes it essential that children with pharyngitis have appropriate testing, diagnosis and treatment.
- Pharyngitis caused by bacteria accounts for only about 30 percent of all cases of pharyngitis in children (Huang et al., 2014).
- Despite improvements in antibiotic prescribing for children with pharyngitis, a substantial number of patients still receive inappropriate antibiotic treatment (Shulman et al., 2012).
- Treating pharyngitis in children costs the United States approximately \$224 to \$539 million each year (Pfoh et al., 2008).
- Each year in the United States, at least 2 million people become infected with antibiotic-resistant bacteria and at least 23,000 people die as a direct result (CDC, "Antibiotic resistance," 2013).
- Antibiotics are often used inappropriately to treat pharyngitis that is not caused by bacteria. Proper testing and treatment of pharyngitis would prevent the spread of sickness, while reducing the unnecessary use of antibiotics (CDC, "Is it strep," 2013).

Evidence for Additional Information Supporting Need for the Measure

Centers for Disease Control and Prevention (CDC). Antibiotic resistance threats in the US. [internet]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2013 [accessed 2014 Sep 24].

Centers for Disease Control and Prevention (CDC). Antibiotics aren't always the answer. [internet]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2013 [accessed 2014 Jun 19].

Centers for Disease Control and Prevention (CDC). Is it strep throat?. [internet]. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2013 [accessed 2014 Jun 09].

Huang LH, Anchala KR, Ellsbury DL, George CS. Pediatric pharyngitis. [internet]. New York (NY): Medscape, LLC; 2014 [accessed 2014 Sep 24].

National Committee for Quality Assurance (NCQA). The state of health care quality 2015. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. 205 p.

Pfoh E, Wessels MR, Goldmann D, Lee GM. Burden and economic cost of group A streptococcal pharyngitis. *Pediatrics*. 2008 Feb;121(2):229-34. [PubMed](#)

Shulman ST, Bisno AL, Clegg HW, Gerber MA, Kaplan EL, Lee G, Martin JM, Van Beneden C. Clinical practice guideline for the diagnosis and management of group A streptococcal pharyngitis: 2012 update by the Infectious Diseases Society of America. *Clin Infect Dis*. 2012 Nov;55(10):e86-e102. [134 references] [PubMed](#)

Simon HK. Pediatric pharyngitis. [internet]. New York (NY): Medscape, LLC; 2014 [accessed 2014 Jun 09].

Extent of Measure Testing

All HEDIS measures undergo systematic assessment of face validity with review by measurement advisory panels, expert panels, a formal public comment process and approval by the National Committee for Quality Assurance's (NCQA's) Committee on Performance Measurement and Board of Directors. Where applicable, measures also are assessed for construct validity using the Pearson correlation test. All measures undergo formal reliability testing of the performance measure score using beta-binomial statistical analysis.

Evidence for Extent of Measure Testing

Rehm B. (Assistant Vice President, Performance Measurement, National Committee for Quality Assurance, Washington, DC). Personal communication. 2015 Mar 16. 1 p.

State of Use of the Measure

State of Use

Current routine use

Current Use

not defined yet

Application of the Measure in its Current Use

Measurement Setting

Ambulatory/Office-based Care

Emergency Department

Hospital Outpatient

Managed Care Plans

Professionals Involved in Delivery of Health Services

not defined yet

Least Aggregated Level of Services Delivery Addressed

Single Health Care Delivery or Public Health Organizations

Statement of Acceptable Minimum Sample Size

Unspecified

Target Population Age

Age 3 to 18 years

Target Population Gender

Either male or female

National Strategy for Quality Improvement in Health Care

National Quality Strategy Aim

Better Care

National Quality Strategy Priority

Prevention and Treatment of Leading Causes of Mortality

Institute of Medicine (IOM) National Health Care Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Data Collection for the Measure

Case Finding Period

A 12-month window that begins on July 1 of the year prior to the measurement year and ends on June 30 of the measurement year

Denominator Sampling Frame

Enrollees or beneficiaries

Denominator (Index) Event or Characteristic

Clinical Condition

Encounter

Patient/Individual (Consumer) Characteristic

Therapeutic Intervention

Denominator Time Window

not defined yet

Denominator Inclusions/Exclusions

Inclusions

Children 3 years of age as of July 1 of the year prior to the measurement year to 18 years of age as of June 30 of the measurement year, with Negative Medication History, who had an outpatient or emergency department (ED) visit with only a diagnosis of pharyngitis and a dispensed antibiotic for that episode of care during the Intake Period

Identify all members who had an outpatient visit (Outpatient Value Set), an observation visit (Observation Value Set) or an emergency department (ED) visit (ED Value Set) with only a diagnosis of pharyngitis (Pharyngitis Value Set).

Determine all pharyngitis Episode Dates. For each member, determine all outpatient or ED claims/encounters with only a diagnosis of pharyngitis.

Determine if antibiotics were dispensed for any of the Episode Dates. For each Episode Date with a qualifying diagnosis, determine if antibiotics were dispensed on or up to three days after. Refer to Table CWP-C in the original measure documentation for a list of antibiotic medications.

Note:

Children must have been continuously enrolled 30 days prior to the Episode Date through 3 days after the Episode Date (34 total days).

Allowable Gap: No gaps in enrollment during the continuous enrollment period.

Episode Date: The date of service for any outpatient or ED visit during the Intake Period with only a diagnosis of pharyngitis.

Negative Medication History: To qualify for Negative Medication History, the following criteria must be met:

A period of 30 days prior to the Episode Date, when the member had no pharmacy claims for either new or refill prescriptions for a listed antibiotic drug.

No prescriptions filled more than 30 days prior to the Episode Date that are active on the Episode Date.

A prescription is considered active if the "days supply" indicated on the date when the member filled the prescription is the number of days or more between that date and the relevant service date. The 30-day look back period for pharmacy data includes the 30 days prior to the Intake Period.

Intake Period: A 12-month window that begins on July 1 of the year prior to the measurement year and ends on June 30 of the measurement year. The Intake Period is used to capture eligible episodes of treatment.

Exclusions

Exclude claims/encounters with more than one diagnosis and exclude ED visits that result in an inpatient admission.

Exclude Episode Dates if the member did not receive antibiotics on or three days after the Episode Date.

Test for Negative Medication History. Exclude Episode Dates where a new or refill prescription for an antibiotic medication was filled 30 days prior to the Episode Date or where a prescription filled more than 30 days prior to the Episode Date was active on the Episode Date. Refer to Table CWP-C in the original measure documentation for a list of antibiotic medications.

Value Set Information

Measure specifications reference value sets that must be used for HEDIS reporting. A value set is the complete set of codes used to identify the service(s) or condition(s) included in the measure. Refer to the [NCQA Web site](#) to purchase HEDIS Volume 2, which includes the Value Set Directory.

Exclusions/Exceptions

not defined yet

Numerator Inclusions/Exclusions

Inclusions

A group A streptococcus (strep) test (Group A Strep Tests Value Set) in the seven-day period from three days prior to the Index Episode Start Date (IESD) through three days after the IESD

Note: *IESD*: The earliest Episode Date during the Intake Period that meets all of the following criteria:

- Linked to a dispensed antibiotic prescription on or during the three days after the Episode Date.

- A 30-day Negative Medication History prior to the Episode Date.

- The member was continuously enrolled during the 30 days prior to the Episode Date through 3 days after the Episode Date.

Exclusions

Unspecified

Value Set Information

Measure specifications reference value sets that must be used for HEDIS reporting. A value set is the complete set of codes used to identify the service(s) or condition(s) included in the measure. Refer to the [NCQA Web site](#) to purchase HEDIS Volume 2, which includes the Value Set Directory.

Numerator Search Strategy

Fixed time period or point in time

Data Source

Administrative clinical data

Pharmacy data

Type of Health State

Does not apply to this measure

Instruments Used and/or Associated with the Measure

Unspecified

Computation of the Measure

Measure Specifies Disaggregation

Does not apply to this measure

Scoring

Rate/Proportion

Interpretation of Score

Desired value is a higher score

Allowance for Patient or Population Factors

not defined yet

Description of Allowance for Patient or Population Factors

This measure requires that separate rates be reported for commercial and Medicaid product lines.

Standard of Comparison

not defined yet

Identifying Information

Original Title

Appropriate testing for children with pharyngitis (CWP).

Measure Collection Name

HEDIS 2016: Health Plan Collection

Measure Set Name

Effectiveness of Care

Measure Subset Name

Respiratory Conditions

Submitter

National Committee for Quality Assurance - Health Care Accreditation Organization

Developer

National Committee for Quality Assurance - Health Care Accreditation Organization

Funding Source(s)

Unspecified

Composition of the Group that Developed the Measure

National Committee for Quality Assurance's (NCQA's) Measurement Advisory Panels (MAPs) are composed of clinical and research experts with an understanding of quality performance measurement in the particular clinical content areas.

Financial Disclosures/Other Potential Conflicts of Interest

In order to fulfill National Committee for Quality Assurance's (NCQA's) mission and vision of improving health care quality through measurement, transparency and accountability, all participants in NCQA's expert panels are required to disclose potential conflicts of interest prior to their participation. The goal of this Conflict Policy is to ensure that decisions which impact development of NCQA's products and services are made as objectively as possible, without improper bias or influence.

Measure Initiative(s)

Physician Quality Reporting System

Adaptation

This measure was not adapted from another source.

Date of Most Current Version in NQMC

2015 Oct

Measure Maintenance

Unspecified

Date of Next Anticipated Revision

Unspecified

Measure Status

This is the current release of the measure.

This measure updates previous versions:

National Committee for Quality Assurance (NCQA). HEDIS 2015: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

National Committee for Quality Assurance (NCQA). HEDIS 2015: Healthcare Effectiveness Data and Information Set. Vol. 2, technical specifications for health plans. Washington (DC): National Committee for Quality Assurance (NCQA); 2014. various p.

Measure Availability

Source available for purchase from the [National Committee for Quality Measurement \(NCQA\) Web site](#)

For more information, contact NCQA at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Phone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org .

Companion Documents

The following are available:

National Committee for Quality Assurance (NCQA). The state of health care quality 2015. Washington (DC): National Committee for Quality Assurance (NCQA); 2015 Oct. 205 p.
National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 2, technical update. Washington (DC): National Committee for Quality Assurance (NCQA); 2015 Oct 1. 12 p.

For more information, contact the National Committee for Quality Assurance (NCQA) at 1100 13th Street, NW, Suite 1000, Washington, DC 20005; Phone: 202-955-3500; Fax: 202-955-3599; Web site: www.ncqa.org .

NQMC Status

This NQMC summary was completed by ECRI on June 16, 2006. The information was not verified by the measure developer.

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Production

Source(s)

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 1, narrative. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

National Committee for Quality Assurance (NCQA). HEDIS 2016: Healthcare Effectiveness Data and Information Set. Vol. 2, technical specifications for health plans. Washington (DC): National Committee for Quality Assurance (NCQA); 2015. various p.

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